

WHAT IS CLAIMED IS:

1. A synthetic fiber rope assembly comprising:
at least two ropes each formed of synthetic fiber strands and extending generally
5 parallel in a lengthwise direction at a predetermined distance from each
other;
a rope sheathing forming a fixed link between said at least two ropes; and
at least one reinforcement element attached to said rope sheathing and exposed at
an outer surface of the rope assembly for mechanically reinforcing said
10 rope sheathing.
2. The rope assembly according to claim 1 wherein said at least one
reinforcement element is an integral component of said rope sheathing.
- 15 3. The rope assembly according to claim 1 wherein said at least one
reinforcement element has an oblong shape and extends in a lengthwise direction along
said rope sheathing at said fixed link.
4. The rope assembly according to claim 1 wherein said at least one
20 reinforcement element extends around and envelopes said the rope sheathing.
5. The rope assembly according to claim 4 wherein said at least one
reinforcement element is shaped as an elongated tube.
- 25 6. The rope assembly according to claim 4 wherein said at least one
reinforcement element overlaps itself in the lengthwise direction.
7. The rope assembly according to claim 1 wherein said at least one
reinforcement element is formed as a strip arranged at said fixed link.

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8. The rope assembly according to claim 1 wherein said at least one reinforcement element is formed from short pieces of fiber integrated into said rope sheathing.

5 9. The rope assembly according to claim 1 wherein said at least one reinforcement element comprises at least one of: a woven mat, which is preferably interlaced in different directions; a fiber mat, which exhibits preferably non-directional fibers; a meander-shaped hoop winding made of filaments, whereby the filaments are preferably arranged in different angles to each other; and a plaited filament arrangement,
10 whereby the filaments of the filament arrangement are loosely or tightly interlaced with each other.

10. The rope assembly according to claim 1 wherein said at least one reinforcement element is one of: arranged in an interior of the rope apparatus between
15 fibers of said ropes and said rope sheathing; arranged as coating within said rope sheathing; and arranged on said outer surface the rope assembly.

11. The rope assembly according to claim 1 wherein said at least one reinforcement element is formed of one aramide, polyester, glass fibers and carbon
20 fibers.

12. The rope assembly according to claim 1 wherein said at least one reinforcement element has a plurality of positive power transmission elements formed as one of: recesses formed therein for interaction with teeth of a toothed pulley; and teeth
25 formed thereon for interaction with recesses of a disk.

13. A synthetic fiber twin rope assembly comprising:
two ropes each formed of a plurality of synthetic fiber strands and extending
generally parallel in a lengthwise direction at a predetermined distance
30 from each other;

a rope sheathing enclosing said ropes and forming a fixed link between said ropes, said ropes and said rope sheathing exhibiting a dumbbell-shaped profile; and

5 at least one reinforcement element attached to said rope sheathing and exposed at an outer surface of the rope assembly for mechanically reinforcing said rope sheathing.

10 14. The rope assembly according to claim 13 wherein said at least one reinforcement element is an integral component of said rope sheathing.

15 15. The rope assembly according to claim 13 wherein said at least one reinforcement element has an oblong shape and extends in a lengthwise direction along said rope sheathing at said fixed link.

16. The rope assembly according to claim 13 wherein said at least one reinforcement element extends around and envelopes said the rope sheathing.

20 17. The rope assembly according to claim 16 wherein said at least one reinforcement element is shaped as an elongated tube.

18. The rope assembly according to claim 16 wherein said at least one reinforcement element overlaps itself in the lengthwise direction.